



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

MAR 3 1995

Ref: 8HWM-FF

Mr. Steven Slaten
U.S. Department of Energy
Rocky flats Office
P.O. Box 928
Golden, Colorado 80402-0928

Re: Exposure Scenarios for the
Baseline Risk Assessment

Dear Mr. Slaten:

On February 21, 1995, representatives of the Department of Energy (DOE), it's contractors, EPA, and the Colorado Department of Health and the Environment (CDPHE) met to discuss comments on Technical Memorandum 5 for Operable Unit 2, Exposure Scenarios. At this meeting, EPA elaborated on its written comments by discussing the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in determining exposure scenarios. Although the discussions centered on an operable unit 2 document, the comments apply to other operable units as well. This letter is to formally document EPA comments provided on February 21, 1995.

Concerning the consideration of a mining future use scenario, EPA relied on the interim products of the Future Site Use Working Group in making the comment that future mining appears likely to occur only in western portions of the Rocky Flats buffer zone. The area is outside of current operable unit boundaries except operable unit 11. There is some uncertainty about this because the working group has not yet made final recommendations to DOE concerning the future use of the site. DOE should verify the likely areas of future mining and document the criteria used to determine the likelihood. If future mining is not likely in the vicinity of operable unit 2, which appears to be the case, this exposure scenario should be **deleted** from consideration in the baseline risk assessment. We would like to attend any **meetings** DOE and/or its contractors have with mining interests at which the likelihood of future mining of Rocky Flats is discussed. We believe this will foster a better collective understanding of this issue.

Concerning the consideration of an on site residential use scenario, EPA again relied on the interim products of the Future Site Use Working Group in making the comment that residential use can be considered outside the range of what is reasonable for the future of Rocky Flats. The preamble to National Contingency Plan states that, in general, a CERCLA

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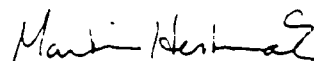
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baseline risk assessment will look at a future land use that is reasonable from land use development patterns, and may be associated with the highest risk (55 Fed Reg 8710, March 8, 1990). Consideration of an on site residential use scenario for Rocky Flats goes beyond the CERCLA requirement. We believe that the need to understand the risks associated with residential use, even if hypothetical, is satisfied by conservative screen conducted for operable unit 2 to comply with CDPHE requirements. DOE may delete this scenario from the baseline risk assessments for all operable units except operable unit 3.

Concerning the consideration of exposure to operable unit 2 chemicals by off site receptors, EPA made the comment that off site receptors are exposed to the cumulative effects of chemicals released from the entire plant site. Limiting the consideration of off site exposure to operable unit 2 chemicals provides an incomplete understanding of the risks to off site receptors. We question the value of this exposure scenario and recommend that DOE delete it from consideration in all on site operable units. The risks to off site receptors must be quantified in a comprehensive site wide risk assessment and by conducting a baseline risk assessment to off site receptors as part of the operable unit 3 remedial investigation using data collected in operable unit 3.

Our other comments can be addressed in the standard comment response process. The reason for the separate submittal of the above comments is that they have important implications beyond operable unit 2. These comments should help to streamline the baseline risk assessment and to focus the feasibility study work for Rocky Flats. We urge DOE to continue to monitor the work of the Future Site Use Working Group as it evolves and to better integrate the work of that group into the Environmental Restoration Program. If you would like to discuss these issues further, please contact me at (303) 294-1134 or our point of contact for risk assessment issues, Bonnie Lavelle, at (303) 294-1067.

Sincerely,



Martin Hestmark, Manager
Rocky Flats Project

cc: Joe Schieffelin, CDPHE
Carl Spreng, CDPHE
Norma Casteneda, DOE
Scott Grace, DOE
Winn Chromec, EG&G

EXPOSURE SCENARIOS

1. All offsite scenarios:
 - 1) Assess risk to offsite receptors for OU3
 - 2) Risk assessments of offsite scenarios will not be required for other OUs (except for OU2 where offsite scenarios have already been assessed)
 - 3) Document cumulative effects to offsite receptors in the Comprehensive Risk Assessment.
2. A Recreational Use scenario will be defined, developed, and included as part of risk assessments performed for OUs outside the industrialized area. This scenario is favored by the Future Site Use Working Group for most of RFETS and should be more conservative than the ecological worker scenario.
3. Based on use maps developed by the FSUWG, the Gravel Miner scenario should be dropped for all OUs. OU11 may need to assess a trespasser pathway for contact with gravel pit waters and subsurface soils.
4. On-site Residential Scenarios:

Performing a Conservative Risk Screen for a site represents a first cut at assessing risk. It does not completely accomplish an assessment of risk to potential on-site residents, but is, by definition, only a risk screen. Nevertheless, when a Baseline Risk Assessment is conducted, CDPHE will not require that an on-site residential exposure scenario be included. However, if a residential exposure scenario is not considered, our collective ability to manage risk will be limited due to a gap in the risk range that has been evaluated. The following advantages are accomplished by evaluating the risk to future residential receptors:

 - 1) If a remedy is selected that does not attain unrestricted use cleanup levels, it is very important for the risk managers and the public to understand what risk is being institutionalized. For example, institutional controls will be required to manage risks above unrestricted use levels for IA IHSSs that are remediated to industrial exposure levels.
 - 2) Performing a residential risk assessment creates another piece of information that may allow cleanup to a level such that the site can leave the regulatory arena by means of a No-Further-Action decision rather than be controlled institutionally. For many IHSSs, remediation to unrestricted use levels may be attainable for little or no incremental cost above that budgeted for remediation that will occur anyway.
 - 3) As outlined in the IHRA Template, IHSSs that already meet residential risk levels as calculated by the conservative screen of 10^{-4} for carcinogens and a hazard quotient of 1 for noncarcinogens can become immediate candidates for a No-Further-Action ROD/CAD, pending evaluation of ARARs and dermal exposure.